SYSTEMS, METHODS AND COMPUTER PROGRAM PRODUCTS FOR CONDUCTING REGULATION-COMPLIANT COMMERCIAL TRANSACTIONS OF REGULATED GOODS VIA A COMPUTER NETWORK

RELATED APPLICATION

This application is a continuation-in-part of U.S. Patent Application Serial No. 09/440,778, filed November 16, 1999, the disclosure of which is

5   incorporated herein by reference in its entirety as if set forth fully herein.

FIELD OF THE INVENTION

The present invention relates generally to

10   commerce and, more particularly, to electronic commerce conducted via a computer network, such as the Internet.

BACKGROUND OF THE INVENTION

Agricultural chemicals, such as insecticides,

15   herbicides, and fungicides, are widely used in agriculture. Agricultural chemicals are typically sold directly to agricultural growers by local independent chemical dealers who act as intermediaries between growers and chemical producers. In order to insure that

20   they are able to meet the demand of growers in their area, local chemical dealers typically carry excess inventory of various chemical products. Unfortunately,

because of the seasonal nature of the agricultural chemical market, and because of geographic crop diversity, excess inventory may be carried for extended periods of time. For example, a local chemical dealer

5   in Mississippi may have to carry excess inventory of cotton chemicals until the next cotton season because growers in the area will not need the chemicals until the next cotton season. Unfortunately, excess inventory may lead to increased costs and may tie up money that

10   could be used elsewhere in a business.

As such, it would be desirable for local chemical dealers to be able to find additional buyers outside of their normal markets in order to help reduce excess inventory. Unfortunately, it may be difficult

15   for a local chemical dealer to become aware of distant buyers. In addition, regulatory constraints, transportation costs, and the credit risk of dealing with unfamiliar customers may make transactions with distant buyers expensive and/or difficult.

20

SUMMARY OF THE INVENTION

In view of the above discussion, the present invention provides systems, methods, and computer program products for facilitating anonymous buying and

25   selling of regulated goods, such as agricultural chemicals, over a computer network, wherein the computer network includes a Web site operated by an intermediary and a plurality of Web clients in communication with the Web site. Buyers and sellers who

30   have "registered" with the intermediary can communicate anonymously with each other via respective Web clients. The intermediary obtains information about each buyer and seller at registration, including location information, identification information, and regulatory

licensing information. The intermediary maintains this information and supplements this information with information obtained from various third party sources over time.

5   According to one embodiment of the present invention, a seller can offer regulated goods for sale at a fixed price by sending a request to the intermediary Web site to list the regulated goods for sale. Alternatively, a seller can offer regulated goods

10   for sale by sending a request to the intermediary Web site to conduct an auction. In either case, the intermediary verifies that the seller is authorized to sell the regulated goods. Typically, this includes verifying that the seller has a valid license issued by

15   a regulatory agency having authority over the regulated goods. This information is typically provided by a seller upon initial registration with the intermediary.

In response to verifying that a seller is authorized to sell the regulated goods, the

20   intermediary lists information about the regulated goods offered for sale over the computer network and awaits an offer from potential buyers to purchase the regulated goods from the seller at the listed sales price. Alternatively, the intermediary conducts an

25   auction and awards the sale of the regulated goods to the highest bidders. Listed information typically includes an identification of the regulated goods (e.g., a brand name), a quantity of the regulated goods, an asking price for the regulated goods, and

30   shipping costs for shipping the regulated goods from the seller's location to a potential buyer's location. In addition, various restrictions may also be listed, such as where and from whom offers to purchase the regulated goods will be rejected by the seller.

In response to receiving an acceptable offer from potential buyers (either as a fixed price sale or via auction), the intermediary verifies that the potential buyers are authorized to purchase the regulated goods. Typically, this includes verifying that the potential buyer has a valid license issued by a regulatory agency having authority over the regulated goods. This information is typically provided by a buyer upon initial registration with the intermediary. In addition, the intermediary may verify that the regulated goods offered for sale are legal for use within the buyer's location using regulatory information maintained by the intermediary and/or accessible to the intermediary via third party product information providers.

In response to verifying that the buyer is authorized to purchase the regulated goods, the intermediary initiates delivery of the regulated goods from the seller to the buyer and initiates a transfer of funds from a financial account of the buyer to a financial account of the intermediary. Preferably, the intermediary notifies a third party freight dispatcher in communication with the computer network to handle delivery of the regulated goods to the buyer. In addition, the intermediary preferably notifies a third party financial institution via the computer network to handle the transfer of funds from the buyer to the intermediary. Upon confirmation by the buyer of acceptance of the delivered goods, funds are then transferred from a financial account of the intermediary to a financial account of the seller.

According to another embodiment of the present invention, the intermediary may conduct a reverse auction over the computer network, wherein

-4-

potential buyers submit bids for selected regulated goods. As described above, verification that a potential buyer is authorized to purchase the regulated goods is conducted by the intermediary. In addition, the intermediary verifies that the regulated goods are legal for use within the buyer's jurisdiction and that a seller of the regulated goods is authorized to sell the regulated goods.

According to another embodiment of the present invention, the intermediary may conduct a reverse auction over the computer network, wherein various carriers can submit bids for delivering the regulated goods from the seller to the buyer. The intermediary can award the job of shipping the regulated goods to the carrier with the lowest bid.

Information about each transaction between a buyer and a seller is stored by the intermediary and is available to regulatory and other governmental agencies having a need to know information about a transaction.

According to other embodiments of the present invention, a seller's Web site facilitates regulation-compliant buying of regulated goods. In an e-commerce format, information about regulated goods for sale by a seller is displayed via the seller's Web site. A potential buyer desiring to purchase the regulated goods offered for sale sends an offer (bid) to purchase the regulated goods to the seller Web site. Upon receiving the bid from the potential buyer, the seller Web site verifies that the potential buyer is authorized to purchase the regulated goods offered for sale. The seller Web site disallows the transaction if the buyer is not authorized to purchase the regulated goods. If the buyer is authorized, the seller Web site then verifies that the regulated goods are legal for

-5-

use within the buyer's jurisdiction. The seller Web
site disallows the transaction if the regulated goods
are not legal for use within the buyer's jurisdiction.
If the regulated goods are legal for use within the
5   buyer's jurisdiction, a transfer of funds from a
financial account of the buyer to a financial account
of the seller is initiated and delivery of the
regulated goods to the buyer is initiated.

        According to other embodiments of the present
10   invention, a seller's Web site facilitates regulation-
compliant buying of regulated goods in an auction
format. Information about regulated goods for sale by a
seller is displayed via a seller Web site. An auction
is conducted via the seller Web site that allows
15   potential buyers to bid on the regulated goods,
typically for a designated period of time. The seller
Web site verifies that each bidder is authorized to
purchase the regulated goods offered for sale. The
seller Web site disallows bidding from a bidder not
20   authorized to purchase the regulated goods. The seller
Web site also verifies that the regulated goods are
legal for use within the a bidder's jurisdiction and/or
are not restricted for use within a bidder's
jurisdiction by the manufacturer of the regulated
25   goods. The seller Web site disallows the transaction if
the regulated goods are not legal for use within the
winning bidder's jurisdiction. If the regulated goods
are legal for use within a bidder's jurisdiction, the
seller Web site awards the sale of the regulated goods
30   to the bidder(s) making the highest bid(s). A transfer
of funds from a financial account of the winning
bidder(s) to a financial account of the seller is
initiated and delivery of the regulated goods to the
winning bidder(s) is initiated.

Embodiments of the present invention may allow agricultural growers the opportunity to shop for the best available price for any type of agricultural input including, but not limited to chemicals, seed,

5   and animal health products, while also ensuring compliance with regulations pertaining to these agricultural inputs. Buyers are not limited to purchasing agricultural inputs from local suppliers.

For sellers of agricultural inputs,

10   embodiments of the present invention may provide an efficient, secure and cost effective way to reduce inventory and improve profits. With a larger market available, sellers can create pricing, sourcing and liquidation strategies that can make their businesses

15   more competitive.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a diagrammatic representation of a computer system for facilitating buying and selling of

20   regulated goods in an anonymous, regulation-compliant forum according to an embodiment of the present invention.

Fig. 2 is a flow chart illustrating operations for registering buyers and sellers with an

25   intermediary, according to the present invention.

Fig. 3 is a flow chart illustrating operations for buying and selling regulated goods at a fixed price via the computer system illustrated in **Fig. 1**, according to an embodiment of the present invention.

30   **Fig. 4** is a flow chart illustrating operations for buying and selling regulated goods in an auction format via the computer system illustrated in

Fig. 1, according to an embodiment of the present invention.

Fig. 5 is a flow chart illustrating operations for verifying that a seller is authorized to sell regulated goods, according to an embodiment of the present invention.

Fig. 6 is a flow chart illustrating operations for verifying that a winning buyer is authorized to purchase regulated goods, according to an embodiment of the present invention.

Fig. 7 is a flow chart illustrating operations for verifying that regulated goods offered for sale are legal for use within a buyer's location, according to an embodiment of the present invention.

Fig. 8 is a flow chart illustrating operations for initiating and completing delivery of regulated goods from a seller to a buyer utilizing the computer system of **Fig. 1**, according to an embodiment of the present invention.

Fig. 9 is a flow chart illustrating operations for initiating the transfer of funds from a buyer to a seller via the computer system illustrated in **Fig. 1**, according to an embodiment of the present invention.

Figs. 10A-10F illustrate exemplary HTML registration forms that can be downloaded from the intermediary's Web site and displayed within a Web browser interface to facilitate buyer/seller registration with the intermediary.

Fig. 11 illustrates an exemplary HTML login page for accessing the computer system of **Fig. 1**, wherein the login page is displayed within a Web

browser interface and has a username field and password fields.

Figs. **12A-12D** and **Figs. 13A-13D** illustrate exemplary HTML forms displayed within a Web browser interface that allow sellers to list products for sale via the computer system of **Fig. 1**. The HTML forms in **Figs. 12A-12D** illustrate listing a product for sale at a fixed sales price. The HTML forms in **Figs. 13A-13D** illustrate listing a product for sale via an auction.

Fig. 12E is an e-mail notification to a seller confirming a fixed price listing of regulated goods for sale according to the present invention.

Fig. 13E is an e-mail notification to a seller confirming a listing of regulated goods for sale via auction according to the present invention.

Figs. 14A-14D illustrate exemplary HTML forms displayed within a Web browser interface that allow buyers to purchase, at a fixed price, items offered for sale via the computer system of **Fig. 1**.

Figs. 14E-14F illustrate e-mail notifications to a seller and buyer, respectively, confirming a sale of regulated goods, according to the present invention.

Figs. 15A-15D illustrate exemplary HTML forms displayed within a Web browser interface that allow buyers to bid on items offered for sale in an auction format via the computer system of **Fig. 1**.

Figs. 16A-16B are the HTML forms of **Fig. 15A** and **15D**, respectively, illustrating use of an automatic bidding agent to incrementally increase a bid to win an auction according to an embodiment of the present invention.

Fig. 17 illustrates an exemplary HTML form containing a freight cost calculator according to an embodiment of the present invention.

Figs. 18A-18I illustrate exemplary HTML forms
5   displayed within a Web browser interface that allow sellers to bid on a buyer's offer to purchase regulated goods in a reverse auction format via the computer system of Fig. 1.

Fig. 19 is a flow chart illustrating
10   operations for buying and selling regulated goods in a reverse auction format via the computer system illustrated in Fig. 1, according to an embodiment of the present invention.

Fig. 20 is a diagrammatic representation of a
15   computer system that facilitates selling regulated goods in a regulation-compliant forum according to an embodiment of the present invention.

Fig. 21 is a flow chart illustrating operations for selling regulated goods at a fixed price
20   via the computer system illustrated in Fig. 20, according to an embodiment of the present invention.

Fig. 22 is a flow chart illustrating operations for selling regulated goods in an auction format via the computer system illustrated in Fig. 20,
25   according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention now is described more fully hereinafter with reference to the accompanying
30   drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth

herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements

5   throughout the description of the drawings.

The Internet

The Internet is a worldwide decentralized network of computers having the ability to communicate

10   with each other. The Internet has gained broad recognition as a viable medium for communicating and for conducting business. The World-Wide Web (Web) was created in the early 1990's, and is comprised of server-hosting computers (Web servers) connected to the

15   Internet that have hypertext documents (referred to as Web pages) stored therewithin. Web pages are accessible by client programs (e.g., Web browsers) utilizing the Hypertext Transfer Protocol (HTTP) via a Transmission Control Protocol/Internet Protocol (TCP/IP) connection

20   between a client-hosting device and a server-hosting device. While HTTP and Web pages are the prevalent forms for the Web, the Web itself refers to a wide range of protocols including Secure Hypertext Transfer Protocol (HTTPS), File Transfer Protocol (FTP), and

25   Gopher, and Web content formats including plain text, HyperText Markup Language (HTML), Extensible Markup Language (XML), as well as image formats such as Graphics Interchange Format (GIF) and Joint Photographic Experts Group (JPEG).

30   A Web site is conventionally a related collection of Web files that includes a beginning file called a "home" page. From the home page, a visitor can access other files and applications at a Web site. A large Web site may utilize a number of servers, which

may or may not be different and which may or may not be geographically-dispersed. For example, the Web site of the International Business Machines Corporation (www.ibm.com) consists of thousands of Web pages and

5   files spread out over multiple Web servers in locations world-wide.

A Web server (also referred to as an HTTP server) is a computer program that utilizes HTTP to serve files that form Web pages to requesting Web

10   clients. Exemplary Web servers include International Business Machines Corporation's family of Lotus Domino® servers, the Apache server (available from www.apache.org), and Microsoft's Internet Information Server (IIS), available from Microsoft Corporation,

15   Redmond, Washington. A Web client is a requesting program that also utilizes HTTP. A browser is an exemplary Web client for use in requesting Web pages and files from Web servers. A Web server waits for a Web client, such as a browser, to open a connection and

20   to request a specific Web page or application. The Web server then sends a copy of the requested item to the Web client, closes the connection with the Web client, and waits for the next connection.

HTTP allows a browser to request a specific

25   item, which a Web server then returns and the browser renders. To ensure that browsers and Web servers can interoperate unambiguously, HTTP defines the exact format of requests (HTTP requests) sent from a browser to a Web server as well as the format of responses

30   (HTTP responses) that a Web server returns to a browser. Exemplary browsers that can be utilized with the present invention include, but are not limited to, Netscape Navigator® (America Online, Inc., Dulles, VA) and Internet Explorer™ (Microsoft Corporation, Redmond,

WA). Browsers typically provide a graphical user interface for retrieving and viewing Web pages, applications, and other resources served by Web servers.

As is known to those skilled in this art, a Web page is conventionally formatted via a standard page description language such as HTML, which typically contains text and can reference graphics, sound, animation, and video data. HTML provides for basic document formatting and allows a Web content provider to specify anchors or hypertext links (typically manifested as highlighted text) to other servers. When a user selects a particular hypertext link, a browser running on the user's client device reads and interprets an address, called a Uniform Resource Locator (URL) associated with the link, connects the browser with a Web server at that address, and makes a request (e.g., an HTTP request) for the file identified in the link. The Web server then sends the requested file to the client device which the browser interprets and renders within a display screen.

Computer System For Buying and Selling Regulated Goods
In a Regulation-Compliant, Anonymous Forum

As will be appreciated by one of skill in the art, the present invention may be embodied as methods, data processing systems, and/or computer program products. Accordingly, the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment or an embodiment combining software and hardware aspects. Furthermore, the present invention may take the form of a computer program product on a computer-usable storage medium having

computer-usable program code means embodied in the medium. Any suitable computer readable medium may be utilized including hard disks, CD-ROMs, optical storage devices, or magnetic storage devices.

5   Computer program code for carrying out operations of the present invention may be written in an object oriented programming language such as JAVA®, Smalltalk or C++. The computer program code for carrying out operations of the present invention may

10 also be written in conventional procedural programming languages, such as "C", JavaScript, Visual Basic, TSQL, Perl, or in a functional (or fourth generation) programming language such as Lisp, SML, or Forth. In addition, Microsoft Active Server Pages (ASP)

15 technology and Java Server Pages (JSP) technology may be utilized. The program code may execute entirely on one or more Web servers and/or application servers, or it may execute partly on one or more Web servers and/or application servers and partly on a remote computer

20 (*i.e.*, a user's Web client), or as a proxy server at an intermediate point in the network. In the latter scenario, the remote computer may be connected to the Web server through a LAN or a WAN (*e.g.*, an intranet), or the connection may be made through the Internet

25 (*e.g.*, via an Internet Service Provider).

         The present invention is described below with reference to flowchart illustrations of methods, apparatus (systems) and computer program products according to an embodiment of the invention. It is

30 understood that each block of the flowchart illustrations, and combinations of blocks in the flowchart illustrations, can be implemented by computer program instructions. These computer program instructions may be provided to a processor of a

general purpose computer, special purpose computer, or
other programmable data processing apparatus to produce
a machine, such that the instructions, which execute
via the processor of the computer or other programmable
data processing apparatus, create means for
implementing the functions specified in the flowchart
block or blocks.

These computer program instructions may also
be stored in a computer-readable memory that can direct
a computer or other programmable data processing
apparatus to function in a particular manner, such that
the instructions stored in the computer-readable memory
produce an article of manufacture including instruction
means which implement the function specified in the
flowchart block or blocks.

The computer program instructions may also be
loaded onto a computer or other programmable data
processing apparatus to cause a series of operational
steps to be performed on the computer or other
programmable apparatus to produce a computer
implemented process such that the instructions which
execute on the computer or other programmable apparatus
provide steps for implementing the functions specified
in the flowchart block or blocks.

Referring now to **Fig. 1**, a computer system **10**
for facilitating regulation-compliant buying and
selling of regulated goods in an anonymous forum,
according to an embodiment of the present invention, is
schematically illustrated. The illustrated system **10**
includes a Web site **12** operated by an intermediary. The
intermediary Web site **12** includes a Web server **14**, a
database server **15**, and multiple databases **16**.
Illustrated databases **16** include a "freight rates"

database **16a**, a "production" database **16b**, and a "product regulatory" database **16c**. Although a single Web server **14** and database server **15** are illustrated, it is understood that multiple Web servers and multiple database servers (including other application servers) may be utilized to perform the functions of the illustrated Web server **14** and database server **15**.

The Web server **14** is the "front end" component of the intermediary Web site **12** and is configured to handle requests from buyers and sellers accessing the intermediary Web site **12**. The Web server **14** includes program code, logic and graphics to conduct one or more on-line auctions, including one or more reverse auctions, in real time. In addition, the Web server **14** includes program code and logic for determining, in real time, freight costs for goods purchased by auction. Exemplary commercial Web servers that may be utilized as a Web server **14** in the illustrated system **10** are Apache, available from the Apache Server Project, http://www.apache.org; Microsoft's Internet Information Server (IIS), available from Microsoft Corporation, Redmond, Washington; and Netscape's FastTrack® and Enterprise™ servers, available from America Online, Inc., Dulles, Virginia. Other Web servers that may be utilized include Novell's Web Server for users of its NetWare® operating system, available from Novell, Inc., San Jose, California; and IBM's family of Lotus Domino® servers, available from International Business Machines Corporation, Armonk, New York.

As is known by those of skill in the art, a database is a collection of data that is organized in "tables." A database typically includes a database

-16-

manager that facilitates accessing, managing, and updating data within the various tables of a database. Exemplary types of databases that can be used to implement the freight rates database, production

5 database, and product regulatory database of the present invention include relational databases, distributed databases (databases that are dispersed or replicated among different points in a network), and object-oriented databases. Relational, distributed, and

10 object-oriented databases are well understood by those of skill in the art and need not be discussed further herein. Exemplary databases that can be used to implement the freight rates database, production database, and product regulatory database include IBM's

15 DB2® database, Microsoft's SQL server database, and database products from Oracle, Sybase, and Computer Associates.

The database server 15 is an application server that operates as a "middleman" server between

20 the Web server 14 and the plurality of databases 16. The database server 15 includes program code and logic for retrieving data from the databases 16 (and from sources external to the Web site 12) in response to requests from the Web server 14. The database server 15

25 is configured to retrieve various product data (*i.e.*, information about regulated goods being sold via the computer system 10), auction participant data (*i.e.*, information about buyers and sellers), transactional data, and regulatory compliance data (*i.e.*, information

30 about regulated goods sold via the computer system 10). Exemplary commercial database servers that may be utilized as a database server 14 in the illustrated system 10 include Microsoft's SQL server, IBM DB2®

-17-

Universal Database server, and the WebSphere™ Net.Commerce server, the latter two being available from International Business Machines Corporation, Armonk, New York.

5   The freight rates database **16a** includes information that allows the database server **15** and web server **14** to determine the costs of shipping goods, in various amounts, from various originating locations to various destinations. Preferably, buyers and sellers

10   can view shipping costs for specific quantities of regulated goods being sold at any time.

The production database **16b** preferably includes one or more of the "tables" listed below in **TABLE 1**. Each table stores the type of information

15   listed in the "Function" column of **TABLE 1**.

TABLE 1

Table Name	Function
Members	- Buyer/Seller registration information (Includes User ID and Password). -User agreement acceptance. - Assigns each user (buyer/seller) a unique member code which links each user to other tables in Production database.
Member Addresses	- Shipping information indicating where goods can be picked up if seller and where goods are to be shipped to if buyer); each buyer and seller can have multiple shipping addresses.
Member Licenses	- Regulatory information including license information for each buyer/seller. - License information includes license type (i.e., dealer, applicator, etc.), expiration date, and state.
Member Accounts	- Payment option information for each buyer/seller (i.e., ACH account information, credit card information, and Farm Plan account information).
Forward	- Product listing information: when a seller lists a fixed price product or auction, all details about the listing (product, packsize, quantity, price, pick-up location,

	etc.) are stored here; each listing assigned a unique id (forward code).
Reverse Auctions	- All product listing information for buyers who place a "want to buy" listing. - Details of each listing (product, packsize, quantity wanted, delivered price, delivery shipping location). - Links listing details back to buyer in Members table. - Assigns each listing a unique id (reverse auction code).
Forward Bids	- Bids for each auction. - Links back to Forward Table by forward code.
Sales	- Information for forward and reverse sales (links back to Forward and Reverse Auction Tables and Member Table.
Products	- Product information for each brand name of good sold, including manufacturer information and information provided by other regulatory agencies and third party information providers (*e.g.*, Environmental Protection Agency (EPA) number; NADA number; etc.).
State Availability	- Indicates whether each product can be sold in each state (*e.g.*, any restrictions imposed by manufacturer, or by federal and/or state agencies)

The product regulatory database **16c** includes information that allows the database server **15** and web server **14** to determine regulations, both federal and state, that apply to any goods sold via the computer system **10**. Preferably, buyers and sellers can view regulatory information that applies to regulated goods being sold at any time. Regulatory information, usage information, safety information, and shipping restriction information may also be viewed by buyers and sellers via third party product information providers via the computer network **10**.

The intermediary Web site **12** is accessible to members (*i.e.*, buyers **18** and sellers **19** who have registered with the intermediary) via a computer network, such as the Internet **20**. Buyers and sellers

18, 19 access the intermediary Web site via a client program, such as a browser, running on a client device, such as a personal computer. However, it is understood that electronic devices, such as personal digital

5   assistants (PDAs), hand-held computers, Internet-ready phones, and WebTVs, may be utilized as client devices for accessing the intermediary Web site **12** in accordance with the present invention.

    The Web server **14** is also configured to

10   communicate with various third parties in order to carry out aspects of the present invention. As will be described below, the illustrated Web server **14** is configured to communicate with various regulatory agencies **22**, one or more third party freight

15   dispatchers **23**, one or more third party financial institutions, and one or more geocoding (*i.e.*, location verification) servers **25**. Communications between the Web server **14** and various third parties are preferably established via the Internet **20**; however, other

20   communications methods may be utilized, including direct dial access and telephonic communications.

    Referring now to **Figs. 2-9**, operations for implementing a computer system that facilitates economically efficient and regulation compliant

25   commercial transactions in an anonymous forum, according to an embodiment of the present invention, are illustrated.

    Referring now to **Fig. 2**, before buyers and sellers can buy or sell regulated goods via the

30   computer system **10**, each buyer/seller must register with the intermediary and become a "member" (Block **100**) of the intermediary Web site **12**. A potential buyer/seller wishing to become a member contacts the

intermediary and provides various identification and location information (Block **110**). Using a third party geocoding server (**25**, **Fig.** 1), the intermediary validates location (*i.e.*, address) information provided 5 by each buyer/seller (Block **115**). As known to those skilled in the art, geocoding servers utilize longitude and latitude information (as well as other information such as postal codes and census data) to verify the accuracy and existence of street addresses. An 10 exemplary third party geocoding server that is accessible via the Internet is available from Etak, Inc., 1605 Adams Drive, Menlo Park, CA (www.etak.com/geoprod.html). However, it is understood that other methods of verifying that an address 15 provided by a buyer/seller exists and/or is accurate may be utilized. The present invention is not limited to the use of a geocoding server.

Information about a financial account that can be debited or credited (depending on whether the 20 party is a buyer or seller) is also provided to the intermediary (Block **120**). The intermediary validates the provided financial account information (Block **125**) with the appropriate third party financial institution (**24**, **Fig.** 1). If the financial information cannot be 25 validated by the appropriate third party financial institution, the buyer/seller is not allowed to buy or sell regulated goods via the computer system (**10**, **Fig.** 1).

A potential buyer/seller wishing to become a 30 member also provides the intermediary with information pertaining to licenses issued to the buyer/seller by a regulatory authority (Block **130**). For example, each buyer/seller is required to list its dealer/distributor

license number, commercial applicator license number,
private applicator license number or any other license
number that may be required in a particular location or
jurisdiction (e.g., federal and state). In addition to
license number, each buyer/seller provides the
intermediary with other information such as expiration
date of each license. The intermediary then validates
(Block **135**) the provided licensing information with the
appropriate Regulatory Agencies (**22**, **Fig. 1**).

A potential buyer/seller wishing to become a
member is also required to enter into a contractual
agreement with the intermediary and to become bound by
various terms, conditions and policies set forth by the
intermediary (Block **140**). Such a user agreement may
include terms, conditions and policies relating to
liability, product quality, taxes, shipping, payment,
shilling, privacy, anonymity of buyers/sellers, and so
forth.

Referring now to **Fig. 3**, operations for
buying and selling regulated goods at a fixed price via
the computer system **10** of **Fig. 1** are illustrated. The
intermediary receives a request from a seller to post
information via the intermediary Web site (**12**, **Fig. 1**)
about regulated goods the seller is willing to sell at
a fixed price (Block **200**). Before listing this
information, the intermediary verifies that the seller
is authorized to sell the regulated goods (Block **210**)
using information provided by the seller during
registration and any additional information available
to the intermediary. Preferably, the seller information
is maintained within the production database (**16b**, **Fig.
1**) and is readily accessible via the database server
(**15**, **Fig. 1**). The intermediary terminates the request

if the seller is not authorized (Block **215**). If the
seller is authorized, the intermediary posts a listing
of the information to potential buyers via the
intermediary Web site (Block **220**).

5   A potential buyer desiring to purchase the
regulated goods offered for sale sends an offer (bid)
to purchase the regulated goods to the intermediary via
the intermediary Web site. Upon receiving the bid from
the potential buyer (Block **230**), the intermediary

10   verifies that the potential buyer is authorized to
purchase the regulated goods offered for sale (Block
240). Preferably, the buyer information is maintained
within the production database (**16b**, **Fig. 1**) and is
readily accessible via the database server (**15**, **Fig.**

15   **1**). The intermediary disallows the transaction if the
buyer is not authorized (Block **245**). If the buyer is
authorized, the intermediary then verifies that the
regulated goods are legal for use within the buyer's
jurisdiction (Block **250**). Preferably, information

20   regarding legality of use of regulated goods within a
buyer's jurisdiction is maintained within the product
regulatory database (**16c**, **Fig. 1**) and is readily
accessible via the database server (**15**, **Fig. 1**).
Alternatively, the intermediary may communicate with

25   one or more regulatory agencies (**22**, **Fig. 1**) to obtain
this information. The intermediary disallows the
transaction if the regulated goods are not legal for
use within the buyer's jurisdiction (Block **255**).

          Preferably, cost information associated with
30   shipping the regulated goods offered for sale is also
displayed to potential buyers. If the regulated goods
are legal for use within the buyer's jurisdiction, the
intermediary initiates a transfer of funds from a

-23-

financial account of the buyer to a financial account of the intermediary (Block **255**) and the intermediary initiates delivery of the regulated goods from the seller to the buyer (Block **260**). The intermediary confirms that the buyer "accepts" the delivered goods (e.g., that the goods are in proper condition and that the correct quantity was delivered) (Block **270**). The buyer's acceptance can be confirmed by the intermediary via communications with the buyer by way of the computer system **10** of **Fig. 1**, or by way of other modes of communication. The intermediary then initiates transfer of funds from the financial account of the intermediary to a financial account of the seller (Block **280**). Steps involved in initiating delivery of the regulated goods and initiating a transfer of funds are described below with respect to **Figs. 8** and **9**.

Preferably, the intermediary stores information about each transaction between a buyer and seller (Block **290**) within the production database (**16b, Fig. 1**). This information may be made available to authorized regulatory agencies and others having a need to know.

Referring now to **Fig. 4**, operations for buying and selling regulated goods in an auction format via the computer system **10** illustrated in **Fig. 1** are illustrated. The intermediary receives a request from a seller to post a listing of information via the intermediary Web site (**12, Fig. 1**) about regulated goods the seller is willing to sell at auction (Block **300**). Before posting this information, the intermediary verifies that the seller is authorized to sell the regulated goods (Block **310**) using information provided by the seller during registration and any additional

-24-

information available to the intermediary. As discussed above, the seller information is preferably maintained within the production database (**16b**, **Fig.** 1) and is readily accessible via the database server (**15**, **Fig.** 1). The intermediary terminates the request if the seller is not authorized (Block **315**). If the seller is authorized, the intermediary conducts an auction via the Web site (**12**, **Fig.** 1) and allows potential buyers to bid on the regulated goods, preferably for a designated period of time (Block **320**).

The intermediary verifies that each bidder is authorized to purchase the regulated goods offered for sale (Block **330**). As discussed above, buyer information is preferably maintained within the production database (**16b**, **Fig.** 1) and is readily accessible via the database server (**15**, **Fig.** 1). The intermediary disallows bidding from a bidder not authorized to purchase the regulated goods (Block **335**). The intermediary also verifies that the regulated goods are legal for use within the a bidder's jurisdiction and/or are not restricted for use within a bidder's jurisdiction by the manufacturer of the regulated goods (Block **340**). As discussed above, information regarding legality of use of regulated goods within a bidder's jurisdiction is preferably maintained within the product regulatory database (**16c**, **Fig.** 1) and is readily accessible via the database server (**15**, **Fig.** 1). Alternatively, the intermediary may communicate with one or more regulatory agencies (**22**, **Fig.** 1) to obtain this information. The intermediary disallows the transaction if the regulated goods are not legal for use within the winning bidder's jurisdiction (Block **355**).

If the regulated goods are legal for use within a bidder's jurisdiction, the intermediary awards the sale of the regulated goods to the bidder(s) making the highest bid(s) (Block **350**). The intermediary then initiates a transfer of funds from a financial account of the winning bidder(s) to a financial account of the intermediary (Block **355**) and initiates delivery of the regulated goods from the seller to the winning bidder(s) (Block **360**). The intermediary confirms that the winning bidder(s) "accepts" the delivered goods (Block **365**) and then initiates transfer of funds from a financial account of the intermediary to a financial account of the seller (Block **370**). A winning bidder's acceptance can be confirmed by the intermediary via communications with a winning bidder by way of the computer system **10** of **Fig. 1**, or by way of other modes of communication. A winning bidder may reject the regulated goods if not delivered in the contractually agreed-to condition and/or amount. Steps involved in initiating delivery of the regulated goods and initiating transfer of funds are described further with respect to **Figs. 8** and **9**.

The intermediary also stores information about each transaction between a winning bidder and seller (Block **380**) within the production database (**16b**, **Fig. 1**). This information may be made available to authorized regulatory agencies and others having a need to know.

Referring now to **Fig. 5**, steps involved in verifying that a seller is authorized to sell regulated goods (Block **210, 310**) are illustrated. The intermediary verifies that the seller has a valid license issued by a regulatory agency having authority

over the regulated goods (Block **211**). License information is preferably maintained within the production database (**16b**, **Fig. 1**) and is readily accessible via the database server (**15**, **Fig. 1**). In

5 addition, the intermediary may communicate with one or more regulatory agencies (**22**, **Fig. 1**) to verify that a seller's license information is still accurate and/or up-to-date.

The intermediary verifies that the seller has

10 provided the intermediary with adequate and valid financial information (Block **212**) and with adequate and valid shipping information (Block **213**). In addition, the intermediary verifies that the seller has contractually bound itself to the intermediary via a

15 user agreement (Block **214**) and that the seller is not in breach of any of the contractual terms and conditions of the user agreement.

Referring now to **Fig. 6**, steps involved in verifying a bidder (or buyer) is authorized to purchase

20 regulated goods (Block **240**, **330**) are illustrated. The intermediary verifies that a bidder has a valid license issued by a regulatory agency having authority over the regulated goods (Block **241**). License information is preferably maintained within the production database

25 (**16b**, **Fig. 1**) and is readily accessible via the database server (**15**, **Fig. 1**). In addition, the intermediary may communicate with one or more regulatory agencies (**2**, **Fig. 1**) to verify that a bidder's license information is still accurate and/or

30 up-to-date.

The intermediary verifies that a bidder has provided the intermediary with adequate and valid financial information (Block **242**) and with adequate and

-27-

valid shipping information (Block **243**). In addition, the intermediary verifies that the bidder contractually bound itself to the intermediary via a user agreement (Block **244**) and that the bidder is not in breach of any

5   of the contractual terms and conditions of the user agreement.

        Referring now to **Fig. 7**, steps involved in verifying that regulated goods offered for sale are legal for use within a buyer's (or bidder's) location

10   (Block **250**, **340**) are illustrated. The intermediary preferably accesses the product regulatory database (**16c**, **Fig. 1**) via the database server (**15**, **Fig. 1**) to verify the legality of the regulated goods within a particular location (Block **251**). In addition, however,

15   the intermediary may communicate with one or more regulatory agencies (**2**, **Fig. 1**) to further verify the legality of the regulated goods within a particular location (Block **252**).

        Referring now to **Fig. 8**, steps involved in

20   initiating delivery of regulated goods from a seller to a buyer or winning bidder (Block **260**, **360**), according to the present invention, are illustrated. The intermediary identifies possible transportation modes (e.g., rail, air, sea, and land) based on the type of

25   the regulated goods, the location of the regulated goods, and the location of the buyer (Block **261**). For example, it may be illegal to ship some regulated goods by air. Thus, only rail, sea and land based shipping modes may be available. In addition, certain

30   jurisdictions may prohibit shipping regulated goods in particular modes along various routes.

        Once possible transportation modes are identified, the intermediary then selects the

transportation mode having the lowest cost and that meets other performance parameters (Block **262**). The term "performance" may include time of delivery, availability of carrier, and so forth. For example, if

5 rail shipment is less expensive than air shipment, but requires an additional week to complete shipment, air shipment may be the preferred transportation mode.

A third party freight dispatcher (**23**, **Fig. 1**), upon receiving notification from the intermediary,

10 retrieves the transportation information from the intermediary and prepares shipping documents for a particular carrier (Block **263**). The third party freight dispatcher makes arrangements with the seller to have the regulated goods picked up a by a designated carrier

15 (Block **264**). The seller verifies the information contained within the shipping documents and prepares the regulated goods for shipment (Block **265**). The third part freight dispatcher also makes arrangements with the buyer to have the regulated goods delivered to the

20 buyer (Block **266**) and directs the carrier to deliver the regulated goods to the buyer (Block **267**) pending authorization from a third party financial institution (**24**, **Fig. 1**) that funds can be transferred from the buyer's account to the seller's account.

25 Referring now to **Fig. 9**, steps involved in initiating a transfer of funds from a buyer's (or winning bidder's) financial account to the financial account of the seller, according to the present invention, are illustrated. The intermediary sends a

30 request to a third party financial institution (**24**, **Fig. 1**) to transfer funds from the financial account of the buyer to the financial account of the intermediary (Block **271**). If the request is denied by the third

party financial institution, the transaction is cancelled (Block **275**) and delivery of the regulated goods is cancelled (Block **276**). Such a request may be denied for various reasons including, but not limited

5   to, lack of sufficient funds in the buyer's account.

If the request is approved by the third party financial institution (Block **272**), the regulated goods are delivered to the buyer (Block **273**). After a predetermined period of time within which the buyer is

10   given to inspect and "accept" the regulated goods, the funds are released to a financial account of the seller from the financial account of the intermediary (Block **274**). The third party financial institution also disburses a percentage of the funds to the

15   intermediary.

Preferably, funds are held in a secure electronic lock box of the intermediary or other third party by a third party financial institution. These funds are held as collateral, on behalf of the buyer

20   and the seller, until the successful delivery of the products sold and until the buyer has had a chance to inspect the delivered goods.

An embodiment of the present invention is illustrated below with respect to agricultural

25   chemicals. However, it is understood that the present invention is not limited to the buying and selling of agricultural chemicals. Virtually any type of product or service may be bought and sold via a computer network implementing the present invention.

30

Buyer/Seller Registration

Each buyer/seller participant registers with the intermediary and provides information including,

but not limited to, identification information, regulatory licensing information, financial information, and shipping information. Buyer/seller registration information is preferably stored for later

5   access in the production database (**16b**, **Fig. 1**).

Figs. 10A-10F, which are described below, illustrate exemplary HTML registration forms that can be downloaded from the intermediary's Web site and displayed within a Web browser interface **1000** to

10   facilitate registration with the intermediary.

Using the illustrated form **1002** of **Fig. 10A**, a buyer/seller provides the intermediary with various identification information including, but not limited to, name, address, phone number, and e-mail address.

15   The illustrated form **1032** includes the following fields in which a buyer/seller provides information:

1) "e-mail address" field **1002a** in which a buyer/seller identifies his/her e-mail address;
2) "name" fields **1002b** in which a

20   buyer/seller identifies his/her first, middle, and last names;
3) "company" field **1002c** in which a buyer/seller identifies his/her company;
4) "location" fields **1002d** in which a

25   buyer/seller identifies his/her address, city, state, and zipcode;
5) "phone" fields **1002e** in which a buyer/seller identifies his/her phone numbers;
6) "fax" field **1002f** in which a buyer/seller

30   identifies his/her fax number; and
7) "user name" **1002g** field in which a buyer/seller identifies a user name he/she will use when accessing the system of the present invention.

35

By activating the "Submit" button **1003**, the information within the form **1002** is submitted to the intermediary as would be understood by those of skill in the art of HTML forms.

Using the illustrated form **1004** of **Fig. 10B**, a buyer/seller accepts the terms and conditions of the intermediary's user agreement **1005** displayed therein. The illustrated user agreement **1005** includes terms and

5   conditions related to products that can be sold via the intermediary's Web site including, but not limited to, seed genetics; anonymity of buyer/sellers; regulatory issues; cancellation of transactions; supply of products; payment; taxes; shipping; returns and claims;

10   shilling; and privacy and security. By activating an "I Accept" button (not shown), a buyer's/seller's acceptance of the intermediary's user agreement is submitted to the intermediary.

Using the illustrated form **1006** of **Fig. 10C**,

15   a buyer/seller provides the intermediary with various shipping information including, but not limited to, buyer/seller name and address **1006a**, and shipping contacts for inbound and outbound products **1006b**, **1006c**. By activating the "Submit" button **1007**, the

20   information within the form **1006** is submitted to the intermediary.

Using the illustrated form **1008** of **Fig. 10D**, a buyer/seller provides the intermediary with information regarding licenses issued to the

25   buyer/seller by regulatory authorities. For each regulatory license issued to the buyer/seller, the buyer/seller identifies the license type (via "license" radio buttons **1008b**), the license number (via "number" field **1008c**), and the state or other jurisdiction (via

30   "state" field **1008a**) within which the license was issued. The illustrated form **1008** also requests that a buyer/seller identify the name (via "name" field **1008d**) to whom the license was issued, and an expiration date

of the license (via "date" field **1008e**). By activating the "Submit" button **1009**, the information within the form **1008** is submitted to the intermediary and stored within the production database (**16b**, **Fig. 1**).

Using the illustrated form **1010** of **Fig. 10E**, a buyer/seller provides the intermediary with information about a financial account with a bank (or other financial institution) into and/or out of which funds can be transferred (depending on whether one is a buyer or seller). The illustrated form **1010** includes a "name" field **1010a** in which the buyer/seller provides his/her name. The illustrated form also includes a "bank name" field **1010b** and "account number" fields **1010c**. By activating a "Submit" button (not shown), the information within the form **1010** is submitted to the intermediary. Various types of financial accounts may be utilized in accordance with the present invention. In addition, credit cards, debit cards, and other financial instruments may be utilized.

Using the illustrated form **1011** of **Fig. 10F**, a seller provides the intermediary with various geographic-oriented information. For example, a seller can designate counties (or other geographic/ jurisdictional entities) in which the seller will deliver regulated goods for free. As another example, a seller can designate counties (or other geographic/ jurisdictional entities) in which the seller will not sell specific regulated goods. The illustrated form **1011** of **Fig. 10F** illustrates selected counties within the state of North Carolina.

Once registered with the intermediary, a buyer/seller is permitted to enter into a secure area of the Web site (**12**, **Fig. 1**) to participate in auctions

-33-

and perform other transactions by "logging in" with a username and password. **Fig. 11** illustrates an exemplary logon page **1020** displayed within a Web browser interface **1000** and having a username field **1021** and

5   password field **1022**. By activating the "Logon" button **1023**, a username and password provided by a buyer/seller is submitted to the Web site and validated using information contained within the production database (**16b**, **Fig. 1**).

10

Listing Items For Sale

Figs. 12A-12D and **Figs. 13A-13D** illustrate exemplary HTML forms displayed within a Web browser interface **1000** that allow sellers to post listings of

15 products for sale via the intermediary's Web site. The forms in **Figs. 12A-12D** illustrate listing a product for sale at a fixed sales price, according to an embodiment of the present invention. The forms in **Figs. 13A-13D** illustrate listing a product for sale via an auction,

20 according to another embodiment of the present invention.

Using the illustrated form **1030** of **Fig. 12A**, a seller provides the intermediary with information about regulated goods that the seller wishes to offer

25 for sale at a fixed price. The illustrated form **1030** includes the following fields in which a buyer/seller provides information:

1) an "ACH account" field **1030a** in which a seller identifies an account into which funds can

30 be transferred from a buyer;
2) a "brand name" field **1030b** in which a seller identifies the brand name of a product being listed for sale;
3) a "packsize" field **1030c** in which a seller

35 identifies a unit quantity of the product being

listed for sale;

4) a "product location" field **1030d** that identifies where the product offered for sale is located;

5) a "cases per pallet" field **1030e** that identifies how many cases, drums or sacks of the product can fit on a single, standard-size pallet;

6) a "pallets for sale" field **1030f** that identifies how many pallets of the product the seller wishes to sell;

7) a "product age" field **1030g** that identifies the date of manufacture of the product;

8) a "free delivery zone" field **1030h** that identifies locations where delivery is free to a buyer;

9) "listing type" radio buttons **1030i** that allow a seller to specify whether the product is to be sold at a fixed price or via auction; and

10) a "remain anonymous" checkbox **1030j** that allows a seller to indicate that he/she wishes to remain anonymous to others.

By activating the "Submit" button **1031**, the information within the form **1030** is submitted to the intermediary.

Referring now to the illustrated form **1032** of **Fig. 12B**, the information provided within the form **1030** of **Fig. 12A** is indicated in the upper portion **1034** of the form **1032**. In the lower portion **1036** of the form **1032**, a seller provides the intermediary with additional information regarding price, location and quantity of the regulated goods offered for sale. A seller can set price and geographic restrictions with respect to sales to various market segments and channels. For example, as indicated in **Fig. 12B**, a seller can set price and geographic restrictions with respect to sales to agricultural growers and agricultural chemical dealers. With respect to agricultural growers, a seller can indicate in the "price" field **1036a** the price at which the seller wishes to sell a product. In addition, a seller can

indicate in the "zone" and "zone exclude/allow" fields **1036b**, **1036c** any geographical limitations on sales to agricultural growers. For example, a seller could indicate that sales are to be excluded from

5   agricultural growers located in certain counties of New Mexico.

Similarly, with respect to agricultural chemical dealers, a seller can indicate in the "price" field **1036d** the price at which the seller is willing to

10   sell the regulated goods to chemical dealers. In addition, a seller can indicate in the "zone" and "zone exclude/allow" fields **1036e**, **1036f** geographical limitations that are to be imposed on sales to agricultural chemical dealers. A seller can also

15   indicate in the "minimum purchase" field **1036g** the minimum number of pallets of a product that the seller is willing to sell in one order. By activating the "Submit" button **1037**, the information within the lower portion **1036** of the form **1032** is submitted to the

20   intermediary.

A complete listing of the information provided by a seller within the lower portion **1036** of form **1032** of **Fig. 12B** and within form **1030** of **Fig. 12A** is provided via form **1038** of **Fig. 12C**.

25   Referring now to **Fig. 12D**, a certification form **1040** that the intermediary requires a seller to "sign" prior to posting a listing of regulated goods for sale is illustrated. By "signing" the illustrated certification form **1040**, a seller is certifying that

30   certain requirements and conditions have been met. For example, an upper portion **1042** of the illustrated certification form **1040** requires a seller to certify that the regulated goods being sold are packaged in

unopened, original manufacturer's cartons and containers, that the regulated goods exactly match the specifications on the regulated goods listing that is to be made available to buyers via the intermediary's

5   Web site (**12, Fig. 1**), that the regulated goods are not more than six months old, and that the regulated goods are correctly labeled. In addition, the illustrated certification form **1040** warns a seller that if regulated goods are misrepresented in any material way,

10   the seller may be barred from using the intermediary's Web site to sell and buy regulated goods in the future.

An intermediate portion **1044** of the illustrated certification form **1040** requires a seller to certify that the intermediary, or a third party

15   financial institution, is authorized to transfer funds into an account identified by the seller. A lower portion **1046** of the illustrated certification form **1040** requires a seller to certify that regulatory license information provided by the seller is valid and

20   accurate. By activating the "Submit" button **1047**, the seller "signs" or certifies that the requirements and conditions set forth in each portion of the certification form **1040** have been met.

Upon receiving a listing from a seller for

25   regulated goods for sale and upon receiving certification that all conditions and requirements are met, the intermediary may submit a confirmation notice **1050** to the seller via e-mail as illustrated in **Fig. 12E**. The illustrated confirmation notice **1050** provides

30   a record of all information provided by the seller to the intermediary that can be stored in the production database (**16b, Fig. 1**) for later access.

The forms in **Figs. 13A-13D** illustrate an

-37-

exemplary process for posting a listing of regulated goods for sale via an auction, according to another embodiment of the present invention. The illustrated form **1060** in **Fig. 13A** is similar to form **1030** in **Fig.**

5 **12A** in that a seller provides the intermediary with information about regulated goods the seller wishes to offer for sale. However, a seller indicates via radio buttons **1030i** (**Fig. 12A**) that the sale is to be conducted via auction format.

10 The illustrated form **1062** of **Fig. 13B** is similar to the illustrated form **1032** of **Fig. 12B** in that the information provided within the form **1060** of **Fig. 13A** is indicated in the upper portion **1064** of the form **1062**. In the lower portion **1066** of the form **1062**,

15 a seller provides the intermediary with additional information regarding price, location, and quantity (fields **1066a-1066e**) as described above with respect to **Fig. 12B**. In addition, a seller can provide the intermediary with auction start and stop times via the

20 "auction start" and "auction end" fields **1066f, 1066g**.

In **Fig. 13C**, the information provided by a seller within the lower portion **1066** of form **1062** of **Fig. 13B** is listed along with the information provided by a seller in the form **1060** of **Fig. 13A** via form **1068**.

25 In **Fig. 13D**, a certification form **1070** that the intermediary requires a seller to "sign" is illustrated. As described above with respect to **Fig. 12D**, by "signing" the illustrated certification form **1070** (*i.e.*, by activating the "Submit" button **1077**), a

30 seller is certifying that certain requirements and conditions have been met.

Upon listing regulated goods for sale and

-38-

certifying that all conditions and requirements are met, the intermediary may submit a confirmation notice **1080** to the seller via e-mail as illustrated in **Fig. 13E**. The illustrated confirmation page **1080** provides a

5   record of information provided by the seller.

Purchasing Items For Sale (Fixed Price)

     Figs. 14A-14D illustrate exemplary HTML forms displayed within a Web browser interface **1000** that

10   allow buyers to purchase, at a fixed price, regulated goods offered for sale via the intermediary's Web site. Using the upper portion **1102** of the illustrated form **1100** of **Fig. 14A**, a buyer can review information about regulated goods offered for sale. The illustrated

15   fields include "Listing Code" **1102a**; "Brand Name" **1102b**; "Seller" **1102c**; "Common Name" **1102d**; "EPA Reg. Number" **1102e**; "Product Age" **1102f**; "Minimum Purchase" **1102g**; "Inclusion/Exclusion Zone" **1102h**; "Free Delivery Zone" **1102i**; "Manufacturer" **1102j**; "Packsize" **1102k**;

20   "Cases Per Pallet" **11021**; and "Price/Gallon" **1102m**. As illustrated in the "seller" field **1102c**, the seller's identity is not disclosed to potential buyers.

     Using the lower portion **1104** of the illustrated form **1100** a buyer can enter the quantity of

25   the regulated goods in the quantity field **1104a**. A buyer also enters a location where the selected regulated goods are to be shipped via the "location" field **1104b**. A buyer also selects a payment option via the "payment option" field **1104c**. Because each buyer

30   "logs-in" with the intermediary, the intermediary can display financial account information maintained on record by the intermediary.

Fig. 14B illustrates a confirmation form 1110 that can be reviewed by a buyer before the buyer's purchase offer is submitted to the seller. By activating the "Add To Shopping Cart" button 1115 in

5 the lower portion 1114 of the form 1110, a buyer confirms that the information in the upper portion 1112 of the form 1110 is correct.

Fig. 14C illustrates a "shopping cart" form 1120 for a particular buyer indicating regulated goods

10 that the buyer has selected for purchasing at the fixed price. As is understood by those of skill in the art of electronic commerce ("e-commerce"), a shopping cart is a tracking device that is used to calculate prices and store product information for later purchase. The

15 illustrated shopping cart form 1120 allows a buyer to add, remove, or modify the quantity of an item "placed" in the "cart." In addition, the illustrated shopping cart form 1120 calculates the price of items and includes taxes and shipping costs. By activating the

20 "Check Out" button 1122, a buyer can proceed to the check-out form 1130 illustrated in Fig. 14D. If the terms of the purchase appear to be in order, a buyer can activate the "Submit" button 1132 in the check-out form 1130 of Fig. 14D. By activating the "Submit"

25 button 1132, the buyer "signs" or certifies that he/she is willing to be contractually bound to purchase the regulated goods.

At this point, the intermediary initiates a transfer of funds from an account of the buyer to an

30 account of the intermediary and initiates delivery of the regulated goods from the seller to the buyer. Once the buyer accepts the delivered goods, the intermediary initiates the transfer of funds from the intermediary

-40-

to the seller as described above with respect to **Figs. 8** and **9**. In addition, the Intermediary can notify the seller and the buyer via e-mail or via other communication methods that the sale is confirmed. **Figs.**

5   **14E** and **14F** illustrate e-mail notifications **1140**, **1142** to a seller and buyer, respectively, confirming a sale.

Purchasing Items For Sale (Auction Format)

       Figs. 15A-15D illustrate exemplary HTML forms

10   displayed within a Web browser interface **1000** that allow potential buyers to bid on regulated goods offered for sale in an auction format via an intermediary's Web site. Using the upper portion **1202** of the illustrated form **1200** of **Fig. 15A**, a potential

15   buyer can review information about particular regulated goods offered for sale. As illustrated in form **1200**, the seller's identity is not disclosed to potential buyers.

       Using an intermediate portion **1204** of the

20   illustrated form **1200**, a potential buyer can enter the quantity of the regulated goods in the quantity field **1204a**, and a bid price the potential buyer is willing to pay in the bid price field **1204b**. A potential buyer also enters a location where the selected item is to be

25   shipped via "location" field **1204c**.

       As illustrated, a potential buyer can also indicate the minimum amount of the regulated goods offered sale that he/she will accept in the "minimum amount" field **1204d**. A potential buyer can also select

30   a payment option via the "payment option" field **1204e**. Because each potential buyer "logs-in" with the intermediary, the intermediary can display financial account information maintained on record by the

intermediary. As such, the potential buyer need only select a desired financial account from which funds are to be transferred should the potential buyer become the winning bidder for the regulated goods.

A "freight cost calculator" can be accessed by activating the link entitled "XSpert Freight Analyst 1204f. **Fig. 17** illustrates an exemplary form **1210** containing a freight cost calculator according to an embodiment of the present invention. A buyer or seller selects a destination location within the "shipped to" field **1210a** and a freight cost calculator determines a shipping cost for the regulated goods of interest.

Upon activating the "Submit" button **1215** in the form **1200** of **Fig. 15A**, a potential buyer is presented with a confirmation form **1220** as illustrated in **Fig. 15B**. The illustrated confirmation form **1220** presents a potential buyer with a compilation of the information available from and provided in form **1200** of **Fig. 15A**. Upon activating the "Submit" button **1225** in the form **1220** of **Fig. 15B**, a potential buyer is presented with a second confirmation form **1230** as illustrated in **Fig. 15C**.

The second confirmation form **1230** requests the potential buyer to certify and confirm that the financial account and regulatory licensing information previously provided to the intermediary is correct. In the illustrated second confirmation form **1230**, an image of a check **1232** drawn on a financial account for the amount of the potential buyer's bid is illustrated. In addition, a description, license number, and expiration date of the potential buyer's regulatory license for buying and using the regulated goods offered for sale is illustrated in a regulatory license portion **1234** of

the illustrated second confirmation form **1230**. Upon
activating the "Submit" button **1235** in the second
confirmation form **1230** of **Fig. 15C**, the potential
buyer's bid is formally entered into an on-going

5   auction. By activating the "Submit" button, the
potential buyer "signs" or certifies that he/she is
willing to be contractually bound to purchase the
regulated goods should his/her bid become a winning
bid.

10   Referring back to **Fig. 15A**, a lower portion
1208 of form **1200** provides an indication of bidding
activities for the regulated goods. Referring now to
Fig. 15D, bidding activity in the lower portion **1208** of
form **1200** is displayed indicating that the potential

15   buyer's submitted bid has been successfully added and
that the potential buyer has won five pallets of the
regulated goods at a bid price of fifty dollars ($50).

Purchasing Items for Sale (Reverse Auction Format)

20   **Figs. 18A-18I** illustrate exemplary HTML forms
displayed within a Web browser interface **1000** that
allow buyers and sellers to participate in a reverse
auction for regulated goods according to another
embodiment of the present invention. Using the

25   illustrated form **1300** of **Fig. 18A**, a buyer enters
information about regulated goods that the buyer wishes
to purchase including a price that the buyer is willing
to pay. Illustrated information fields in which a buyer
selects or enters information include a "Brand Name"

30   field **1300a**, a "Generic Substitute" radio button **1300b**,
a "Packsize" field **1300c**, a "Ship to Address" field
1300d, a "Quantity Desired" field **1300e**, a "Maximum
Delivered Price/Unit" field **1300f**, a "Payment Option"

field **1300g**, a "Maximum Product Age" field **1300h**, and "Listing Start" and "Listing End" date fields **1300i**, **1300j**.

Upon activating the "Continue" button **1302** in the form **1300** of **Fig. 18A**, a buyer is presented with a confirmation form **1310** as illustrated in **Fig. 18B**. The illustrated confirmation form **1310** presents a buyer with a compilation of the information available from and provided in form **1300** of **Fig. 18A**. Upon activating the "Continue" button **1312** in the form **1310** of **Fig. 18B**, a buyer is presented with a second confirmation form illustrated in two parts **1320a**, **1320b** in **Figs. 18C** and **18D**, respectively.

The first and second parts **1320a**, **1320b** of the second confirmation form requests the buyer to certify and confirm that the financial account and regulatory licensing information previously provided to the intermediary is correct. In the illustrated first part **1320a** of the second confirmation form, an image of a check **1322** drawn on a financial account for the amount the buyer is willing to pay for the regulated goods is illustrated. In addition, a description, license number, name, and expiration date of the buyer's regulatory license for buying and using the regulated goods is illustrated in the second part **1320b** of the illustrated second confirmation form. Upon activating the "Submit" button **1324** in the second confirmation form of **Figs. 18C** and **18D**, the buyer's offer is listed and a reverse auction is conducted via the computer system **10** of **Fig. 1**. By activating the "Submit" button **1324**, the potential buyer "signs" or certifies that he/she is willing to be contractually

bound to purchase the regulated goods should his/her offer become accepted by a seller.

Referring now to **Fig. 18E**, an exemplary buyer's offer to purchase regulated goods is illustrated in form **1330**. A seller wishing to accept the buyer's offer at the buyer's price provides various information via form **1340** illustrated in **Fig. 18F**. Illustrated information fields include an "ACH Account" field **1340a**, a "Brand Name" field **1340b**, a "Packsize" field **1340c**, a "Shipping Location" field **1340d**, a "Cases per Pallet" field **1340e**, a "Pallets for Sale" field **1340f**, a "Total Quantity" field **1340g**, a "Product Age" field **1340h**, a "Delivered Price/Unit" field **1340i**, and a "Seller Offering Price" field **1340j**. Upon activating the "Submit" button **1342**, in the form **1340** of **Fig. 18F**, a seller is presented with a confirmation form **1350** as illustrated in **Fig. 18G**. The illustrated confirmation form **1350** presents a seller with a compilation of the information available from and provided in form **1340** of **Fig. 18F**.

Upon activating the "Submit" button **1352** in the form **1350** of **Fig. 18G**, a seller is presented with a second confirmation form illustrated in two parts **1360a**, **1360b** in **Figs. 18H** and **18I**. The first and second parts **1360a**, **1360b** of the second confirmation form requests the seller to certify and confirm that the regulated goods being sold by the seller comply with various regulations and that financial account information previously provided to the intermediary is correct. In the illustrated second part **1360b** of the second confirmation form, an image of a deposit ticket **1362** for a financial account in the amount the buyer is

willing to pay for the regulated goods is illustrated. By activating the "Submit" button **1364**, the seller "signs" or certifies that he/she is willing to be contractually bound to sell the regulated goods to the

5   buyer.

Referring now to **Fig. 19**, operations for buying and selling regulated goods in a reverse auction format via the computer system **10** of **Fig. 1** are illustrated. The intermediary receives a request from a

10   buyer to post an offer via the intermediary Web site (**12, Fig. 1**) about regulated goods the buyer is willing to purchase (Block **400**). Before posting this information, the intermediary verifies that the buyer is authorized to purchase the regulated goods (Block

15   **410**) using information provided by the buyer during registration and any additional information available to the intermediary. As discussed above, the buyer information is preferably maintained within the production database (**16b, Fig. 1**) and is readily

20   accessible via the database server (**15, Fig. 1**). The intermediary terminates the request if the buyer is not authorized (Block **415**). If the buyer is authorized, the intermediary conducts a reverse auction via the Web site (**12, Fig. 1**) and allows potential sellers to bid

25   on the buyer's offer, preferably for a designated period of time (Block **420**).

The intermediary verifies that a seller making a bid that satisfies the offer of the buyer is authorized to sell the regulated goods (Block **430**). As

30   discussed above, seller information is preferably maintained within the production database (**16b, Fig. 1**) and is readily accessible via the database server (**15, Fig. 1**). The intermediary disallows the transaction if

-46-

the seller is not authorized to sell the regulated goods (Block **435**). If the seller is authorized, the intermediary then verifies that the regulated goods are legal for use within the buyer's jurisdiction and/or

5 are not restricted for use within the buyer's jurisdiction by the manufacturer of the regulated goods (Block **440**). As discussed above, information regarding legality of use of regulated goods within a buyer's jurisdiction is preferably maintained within the

10 product regulatory database (**16c**, **Fig. 1**) and is readily accessible via the database server (**15**, **Fig. 1**). Alternatively, the intermediary may communicate with one or more regulatory agencies (**22**, **Fig. 1**) to obtain this information. The intermediary disallows the

15 transaction if the regulated goods are not legal for use within the buyer's jurisdiction (Block **445**).

If the regulated goods are legal for use within the buyer's jurisdiction, the intermediary awards the sale of the regulated goods to the seller

20 making the bid that satisfies the buyer's offer (Block **450**). The intermediary then initiates a transfer of funds from a financial account of the buyer to a financial account of the intermediary (Block **455**) and initiates delivery of the regulated goods from the

25 seller to the buyer (Block **460**). The intermediary confirms that the buyer "accepts" the delivered goods (Block **465**) and then initiates transfer of funds from a financial account of the intermediary to a financial account of the seller (Block **470**). The buyer's

30 acceptance can be confirmed by the intermediary via communications with the buyer by way of the computer system **10** of **Fig. 1**, or by way of other modes of communication. The buyer may reject the regulated goods

if not delivered in the contractually agreed-to
condition and/or amount. The intermediary also stores
information about each transaction between a buyer and
seller (Block **480**) within the production database (**16b,**
Fig. 1). This information may be made available to
authorized regulatory agencies and others having a need
to know.

Automatic Bidding Agent

According to another embodiment of the
present invention, an automatic bidding agent may be
provided to allow potential buyers to automatically
increase his/her bids by an incremental amount (up to a
maximum amount) in response to higher bids of other
potential buyers in order to place a winning bid. An
incremental amount may be any positive value, but
preferably any positive value equal to or greater than
one cent. As such, a potential buyer utilizing an
automatic bidding agent according to the present
invention does not need to monitor an auction.
According to the present invention, potential buyers do
not know what the maximum bid of other potential buyers
is. If the auction price does not reach the pre-
determined maximum price, the potential buyer will only
have to pay the minimum winning price.

An agent is a software program that acts on
behalf of a user as it performs tasks within an
application program. An automatic bidding agent
according to the present invention may run on a
buyer's/seller's Web client and/or on the Web server
(**14, Fig. 1**). Agents are well understood by those of
skill in the art and need not be described further
herein.

Referring now to **Fig. 16A**, the form **1200** of **Fig. 15a** is illustrated with a portion **1206** that allows a potential buyer to implement an automatic bidding agent according to the present invention. In the "maximum bid" field **1206a**, a potential buyer indicates the maximum amount he/she is willing to pay for a particular product offered for sale. In the "bid increment" field **1206b**, a potential buyer indicates the amount he/she wishes to increase his/her bid in order to overcome higher bids of other potential buyers. An automatic bidding agent will then incrementally increase the potential buyer's bid to overcome bids made by other potential buyers until either this potential buyer wins the bid or the maximum bid as indicated in the "maximum bid" field **1206a** is reached. At any time, a buyer can modify parameters of the automatic bidding agent regarding the maximum bid, bidding increment, quantity of product, and minimum acceptable quantity.

Referring now to **Fig. 16B**, bidding activity in the lower portion **1208** of form **1200** is displayed indicating that the potential buyer's submitted bid has been successfully added and that the potential buyer has won six pallets of the regulated goods at a bid price of fifty dollars and two cents ($50.02). The bidding agent raised the potential buyer's bid by two cents in order to make the potential buyer the winning bidder.

Seller Web Site

Referring now to **Figs. 20-22**, other embodiments of the present invention are illustrated. In **Fig. 20**, a computer system **10'** that facilitates

-49-

regulation-compliant buying regulated goods, according to embodiments of the present invention, is illustrated. The illustrated system 10' includes a Web site 12' operated by a seller of regulated goods. The term "seller" means any seller of regulated goods including, but not limited to, retail merchants, wholesale merchants, distributors, manufacturers, etc.

The illustrated seller Web site 12' can have the same functionality as the intermediary Web site 12 of **Fig. 1** except that Web site 12' is the Web site of a seller of regulated goods. As such, regulatory-compliant transactions can be only between a particular seller and one or more buyers. The illustrated seller Web site 12' includes a Web server 14, a database server 15, and multiple databases 16. Illustrated databases 16 include a "freight rates" database 16a, a "production" database 16b, and a "product regulatory" database 16c. Although a single Web server 14 and database server 15 are illustrated, it is understood that multiple Web servers and multiple database servers (including other application servers) may be utilized to perform the functions of the illustrated Web server 14 and database server 15.

The Web server 14 is the "front end" component of the seller Web site 12' and is configured to handle requests from buyers accessing the seller Web site 12'. The Web server 14 includes program code, logic and graphics to, for example, perform purchase transactions of regulated goods and to conduct one or more on-line auctions, including one or more reverse auctions, in real time. In addition, the Web server 14 includes program code and logic for determining, in real time, freight costs for goods purchased by

auction. Exemplary commercial Web servers that may be utilized as a Web server **14** in the illustrated system **10'** include, but are not limited to, those described above with respect to the intermediary Web site **12** of

5   **Fig. 1.**

Exemplary types of databases that can be used to implement the freight rates database **16a**, production database **16b**, and product regulatory database **16c** of the seller Web site **12'** include, but are not limited

10   to, those described above with respect to the intermediary Web site **12** of **Fig. 1.**

The database server **15** includes program code and logic, for example, that retrieves data from the databases **16** (and from sources external to the seller

15   Web site **12'**) in response to requests from the Web server **14**. The database server **15** is configured to retrieve various product data (*i.e.*, information about regulated goods being sold via the computer system **10'**), auction participant data (*i.e.*, information about

20   buyers), transactional data, and regulatory compliance data (*i.e.*, information about regulated goods sold via the computer system **10'**). Exemplary commercial database servers that may be utilized as a database server **15** in the illustrated system **10'** include, but are not limited

25   to, those described above with respect to the intermediary Web site **12** of **Fig. 1.**

The freight rates database **16a** includes information that allows the database server **15** and web server **14** to determine the costs of shipping goods, in

30   various amounts, to various destinations. Preferably, buyers can view shipping costs for specific quantities of regulated goods being sold at any time.

The production database **16b** preferably includes one or more of the "tables" listed above in **TABLE 1**, and each table stores the type of information listed in the "Function" column of **TABLE 1**.

5   The product regulatory database **16c** includes information that allows the database server **15** and web server **14** to determine regulations, both federal and state (as well as any other, such as municipal regulations), that apply to any goods sold via the

10   computer system **10'**. Preferably, buyers can view regulatory information that applies to regulated goods being sold at any time. Regulatory information, usage information, safety information, and shipping restriction information may also be viewed by buyers

15   via third party product information providers via the computer network **10'**.

The seller Web site **12'** is accessible to buyers **18** via a computer network **20**, such as the Internet, an intranet, or other types of private/public

20   networks. Buyers **18** access the seller Web site **12'** via a client program, such as a browser, running on a client device, such as a personal computer. However, various client programs executing on various types of client devices, as described above with respect to **Fig.**

25   **1**, may be utilized to access the seller Web site **12'**.

The Web server **14** is also configured to communicate with various third parties in order to carry out aspects of the present invention. As described above with respect to **Fig. 1**, the Web server

30   **14** is configured to communicate with various regulatory agencies **22**, one or more third party freight dispatchers **23**, one or more third party financial institutions, and one or more geocoding (*i.e.*, location

-52-

verification) servers **25**. Communications between the Web server **14** and various third parties are preferably established via the Internet **20**; however, other communications methods may be utilized, including

5   direct dial access and telephonic communications.

Referring now to **Fig. 21**, systems, methods and computer program products for implementing a computer system that facilitates economically efficient and regulation compliant commercial transactions in an

10   anonymous forum, according to embodiments of the present invention, are illustrated. Information about regulated goods for sale by a seller is displayed via the seller Web site **12'** (Block **500**). According to embodiments of the present invention, this information

15   may only be displayed to potential buyers located in geographic locations where the regulated goods are legal for sale. Accordingly, only buyers in areas where it is legal to purchase the regulated goods can submit bids for the regulated goods.

20   A potential buyer desiring to purchase the regulated goods offered for sale sends an offer (bid) to purchase the regulated goods to the seller Web site **12'**. Upon receiving the bid from the potential buyer (Block **510**), the seller Web site **12'** verifies that the

25   potential buyer is authorized to purchase the regulated goods offered for sale (Block **520**). Preferably, the buyer information is maintained within the production database (**16b**, **Fig. 20**) and is readily accessible via the database server (**15**, **Fig. 20**). The seller Web site

30   **12'** disallows the transaction if the buyer is not authorized to purchase the regulated goods (Block **525**). If the buyer is authorized, the seller Web site **12'** then verifies that the regulated goods are legal for

use within the buyer's jurisdiction (Block **530**).
Preferably, information regarding legality of use of
regulated goods within a buyer's jurisdiction is
maintained within the product regulatory database (**16c**,
5 **Fig. 20**) and is readily accessible via the database
server (**15, Fig. 20**). Alternatively, the seller may
communicate with one or more regulatory agencies (**22,
Fig. 20**) to obtain this information. The seller Web
site **12'** disallows the transaction if the regulated
10 goods are not legal for use within the buyer's
jurisdiction (Block **535**).

Cost information associated with shipping the
regulated goods offered for sale may also be displayed
to potential buyers. If the regulated goods are legal
15 for use within the buyer's jurisdiction, a transfer of
funds from a financial account of the buyer to a
financial account of the seller is initiated (Block
540) and delivery of the regulated goods to the buyer
is initiated (Block **550**). The seller confirms that the
20 buyer "accepts" the delivered goods (*e.g.*, that the
goods are in proper condition and that the correct
quantity was delivered) (Block **560**). The buyer's
acceptance can be confirmed by the seller via
communications with the buyer by way of the computer
25 system **10'** of **Fig. 20**, or by way of other modes of
communication. Steps involved in initiating delivery of
the regulated goods and initiating a transfer of funds
may include those described above with respect to **Figs.
8** and **9**.

30 Information about each transaction with a
buyer may be stored (Block **570**) within the production
database (**16b, Fig. 20**). This information may be made
available to authorized regulatory agencies and others

having a need to know.

Referring now to **Fig. 22**, systems, methods and computer program products that facilitate buying regulated goods in an auction format via the computer system **10'** illustrated in **Fig. 20** are illustrated. Information about regulated goods for sale is displayed via the seller Web site **12'** (Block **600**) and an auction is conducted via the seller Web site (**12'**, **Fig. 20**) that allows potential buyers to bid on the regulated goods, preferably for a designated period of time (Block **610**). According to embodiments of the present invention, this information may only be displayed to potential buyers located in geographic locations where the regulated goods are legal for sale. Accordingly, only buyers in areas where it is legal to purchase the regulated goods can submit bids for the regulated goods.

The seller Web site **12'** verifies that each bidder is authorized to purchase the regulated goods offered for sale (Block **620**). As discussed above, buyer information is preferably maintained within the production database (**16b**, **Fig. 20**) and is readily accessible via the database server (**15**, **Fig. 20**). The seller Web site **12'** disallows bidding from a bidder not authorized to purchase the regulated goods (Block **625**). The seller Web site also verifies that the regulated goods are legal for use within the a bidder's jurisdiction and/or are not restricted for use within a bidder's jurisdiction by the manufacturer of the regulated goods (Block **630**). As discussed above, information regarding legality of use of regulated goods within a bidder's jurisdiction is preferably maintained within the product regulatory database (**16c**,

Fig. 20) and is readily accessible via the database server (**15, Fig. 20**). Alternatively, the seller may communicate with one or more regulatory agencies (**22, Fig. 20**) to obtain this information. The seller Web

5   site **12'** disallows the transaction if the regulated goods are not legal for use within the winning bidder's jurisdiction (Block **635**).

If the regulated goods are legal for use within a bidder's jurisdiction, the seller Web site **12'**

10   awards the sale of the regulated goods to the bidder(s) making the highest bid(s) (Block **640**). A transfer of funds from a financial account of the winning bidder(s) to a financial account of the seller is initiated (Block **650**) and delivery of the regulated goods to the

15   winning bidder(s) is initiated (Block **660**). A winning bidder's acceptance of the regulated goods (*e.g.*, that the goods are in proper condition and that the correct quantity was delivered) can be confirmed (Block **670**) via communications with a winning bidder by way of the

20   computer system **10'** of **Fig. 20**, or by way of other modes of communication. A winning bidder may reject the regulated goods if not delivered in the contractually agreed-to condition and/or amount. Steps involved in initiating delivery of the regulated goods and

25   initiating transfer of funds may include those described above with respect to **Figs. 8** and **9**.

The seller Web site **12'** may also store information about each transaction (Block **680**) within the production database (**16b, Fig. 20**). This

30   information may be made available to authorized regulatory agencies and others having a need to know.

The foregoing is illustrative of the present invention and is not to be construed as limiting

thereof. Although a few exemplary embodiments of this invention have been described, those skilled in the art will readily appreciate that many modifications are possible in the exemplary embodiments without

5   materially departing from the novel teachings and advantages of this invention. Accordingly, all such modifications are intended to be included within the scope of this invention as defined in the claims. In the claims, means-plus-function clause are intended to

10   cover the structures described herein as performing the recited function and not only structural equivalents but also equivalent structures. Therefore, it is to be understood that the foregoing is illustrative of the present invention and is not to be construed as limited

15   to the specific embodiments disclosed, and that modifications to the disclosed embodiments, as well as other embodiments, are intended to be included within the scope of the appended claims. The invention is defined by the following claims, with equivalents of

20   the claims to be included therein.